

WHAT IS CLAIMED IS:

1. A digital broadcasting set-top box comprising:

- a tuning section for tuning a radio frequency digital broadcasting stream;
- a demultiplexer for separating an audio data, a video data, and an information data from the radio frequency digital broadcasting stream;
- a decoding section for decoding the information data;
- a storing section for temporary storing the decoded information data;
- an advertisement data processing section for searching an advertisement data among the decoded data storing in the storing section, updating the searched advertisement data, and confirming a displaying time of the advertisement data;
- a graphic processing section for converting the advertisement data processed by the advertisement data processing section and the information data to an image data;
- and
- a synthesizing section for synthesizing the image data and a video data decode by a media decoder.

2. The set-top box as claimed in claim 1, wherein the advertisement data processing section comprises:

- an updating controller for searching whether the advertisement data is updated or not;
- an advertisement data storing section for storing the advertisement data and the

updated advertisement data by the updating controller; and

an advertisement data interpreter provide with a solution which interprets a displaying time and an attribute of the advertisement data stored in the advertisement data storing section.

3. An advertising method comprising the steps of:

- 1) tuning a radio frequency digital broadcasting stream;
- 2) separating an audio data, a video data, and an information data from the tuned radio frequency digital broadcasting stream;
- 3) searching an advertisement data among the separated information data and updating the searched advertisement data;
- 4) converting the updated advertisement data into an image data; and
- 5) synthesizing the image data and a video data.

4. The method as claimed in claim 3, wherein the searching and updating step comprises the steps of:

- i) loading the advertisement data stored in the storing section and searching an attribute of the advertisement data;
- ii) determining whether the advertisement data is updated or not by determining a version and a priority of the advertisement data by an updating program installed in a updating controller;
- iii) determining whether a data owner is who has an updating authority by using

a security and authentication method;

iv) determining a reliability of the advertisement data by an updating program installed in an updating controller; and

v) storing an updated advertisement data in the advertisement data storing section.

5. The method as claimed in claim 3, wherein the converting step comprises the steps of:

- a) reading a displaying time information of the advertisement data;
- b) determining a starting time when the advertisement data is began to be displayed on a television screen in accordance with the displaying time information;
- c) interpreting a data schedule, a data format and a graphic processing method of the advertisement data by a program installed in an advertisement information interpreter;
- d) converting the advertisement data into an image data to be displayed on the television screen based on the interpreted information; and
- e) displaying the advertisement data on the television screen so that the displaying time of the converted advertisement data is always checked.

6. A advertising method by using a digital broadcasting set-top box, comprising

1) providing a digital broadcasting set-top box according to claims 1 or 2 in which contents of an advertisement ordered by an advertiser who paid an advertising rate is

stored to a viewer by a broadcasting company, the digital broadcasting set-top box being produced by order from the broadcasting company, and the digital broadcasting set-top box including the contents of the advertisement; and

2) sequentially displaying the advertisement of the advertiser on a television screen of the viewer in which the digital broadcasting set-top box is installed.